

## Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Texas

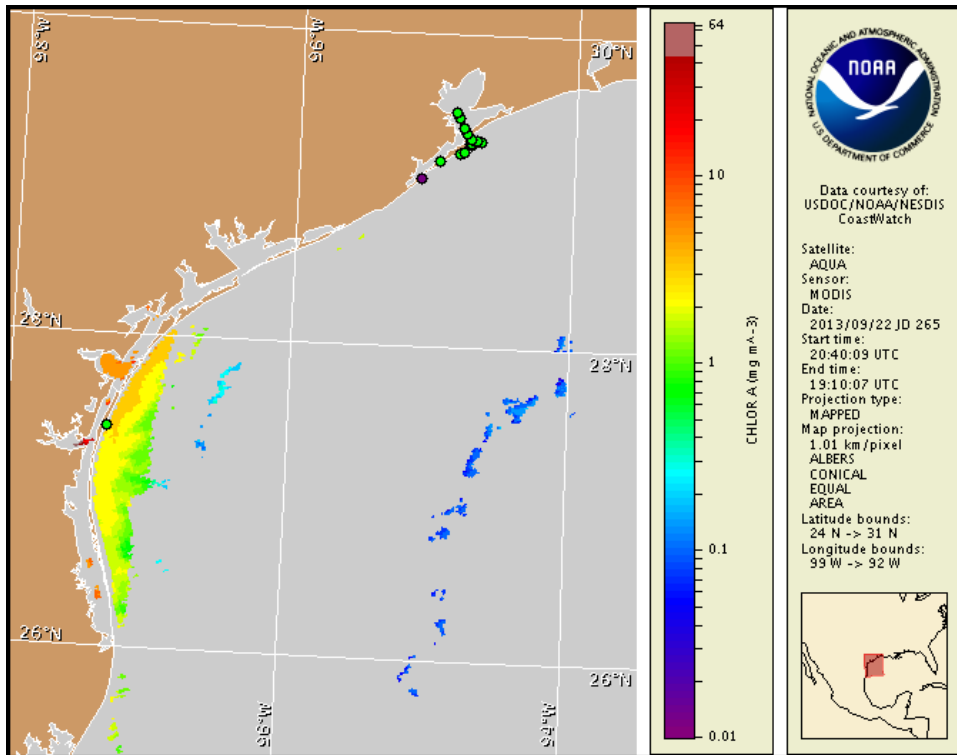
Monday, 23 September 2013

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Thursday, September 19, 2013



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s), when applicable. Points represent cell concentration sampling data from September 13 to 19: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). Cell count data are provided by Texas Parks and Wildlife Department. For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

[http://tidesandcurrents.noaa.gov/hab/habfs\\_bulletin\\_guide.pdf](http://tidesandcurrents.noaa.gov/hab/habfs_bulletin_guide.pdf)

Detailed sample information can be obtained through the Texas Parks and Wildlife Department at:

<http://www.tpwd.state.tx.us/landwater/water/envconcerns/hab/redtide/status.phtml>

To see previous bulletins and forecasts for other Harmful Algal Bloom Bulletin regions, visit the NOAA Harmful Algal Bloom Operational Forecast System bulletin archive:

<http://tidesandcurrents.noaa.gov/hab/bulletins.html>

## Conditions Report

Not present to low concentrations of *Karenia brevis* (commonly known as Texas red tide) are present along the coast of Texas. *K. brevis* concentrations are patchy in nature and levels of respiratory irritation will vary locally based upon nearby bloom concentrations, ocean currents, and wind speed and direction. The highest level of potential respiratory irritation forecast for Monday, September 23 to Thursday, September 26 is listed below:

**Region:** Forecast (Duration)

**Port Aransas/Mustang Island to Padre Island National Seashore region:** Very Low (M-Th)

**Padre Island National Seashore region:** Very Low (M-Th)

**All Other Texas regions:** None expected (M-Th)

Check [http://tidesandcurrents.noaa.gov/hab/beach\\_conditions.html](http://tidesandcurrents.noaa.gov/hab/beach_conditions.html) for recent, local observations. Health information, from the Texas Department of State Health Services and other agencies, is available at [http://tidesandcurrents.noaa.gov/hab/hab\\_health\\_info.html](http://tidesandcurrents.noaa.gov/hab/hab_health_info.html). No reports of respiratory irritation or dead fish have been received over the past few days.

There are currently patches of a bloom of the algae *Aureoumbra lagunensis* in the upper Laguna Madre region. This algae species does not produce the respiratory irritation associated with the Texas red tide caused by *Karenia brevis*, but it may cause discolored water and fish kills.

## Analysis

Concentrations of *Karenia brevis* continue to decrease where they were previously identified in the Bolivar Peninsula, Galveston, San Luis Pass to Sargent Beach, and Port Aransas/Mustang Island to Padre Island National Seashore (PINS) regions of Texas. In the Galveston Island, Galveston Bay, and Bolivar Peninsula regions, *K. brevis* concentrations have continued to decrease within the Bolivar Roads Pass and along Galveston Island and recent samples indicate that *K. brevis* is 'not present' (TPWD; 9/19). In the Port Aransas region, Texas A&M University's Imaging Flow Cytobot continues to indicate decreasing *K. brevis* concentrations ranging between 'not present' and 'very low a' at Port Aransas (TAMU, TPWD; 9/23). No new samples have been received from the PINS region since samples collected last week indicated that *K. brevis* concentrations ranged between 'not present' and 'very low b' (TPWD; 9/18). No impacts have been reported from anywhere along the Texas coast over the last few days (TPWD; 9/20-23).

Over the past few days, MODIS Aqua imagery (9/22, shown left) has continued to be almost completely obscured by clouds, limiting analysis. A small patch of elevated chlorophyll (2-3 µg/L) is visible along- and offshore the coast from San Jose Island to the Padre Island region. Elevated chlorophyll is not necessarily indicative of the presence of *K. brevis* and could also be due to the resuspension of benthic chlorophyll and sediments along the coast. In situ sampling is necessary to confirm the presence of *K. brevis*.

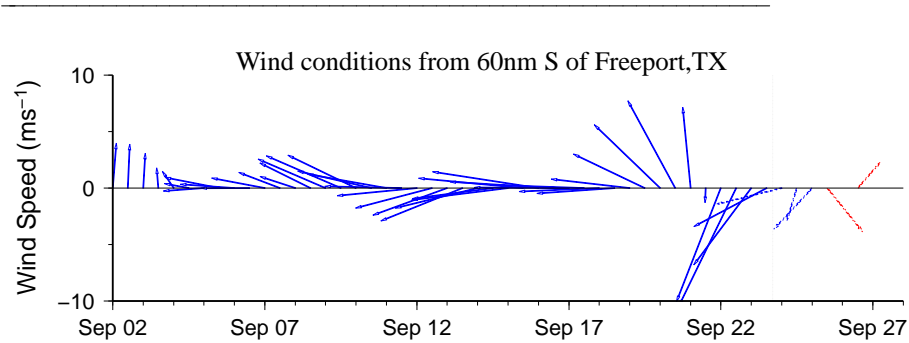
Forecast models based on predicted near-surface currents indicate a maximum bloom transport from coastal sample locations of 100 km south from the Bolivar Roads Pass region, 90 km south from the Port Aransas region, and 100 km south from the PINS 0 mile marker region from September 22-26. \*Kavanaugh, Derner

## Wind Analysis

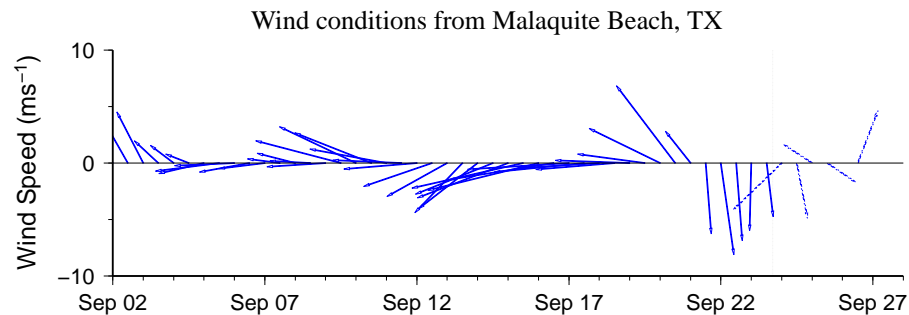
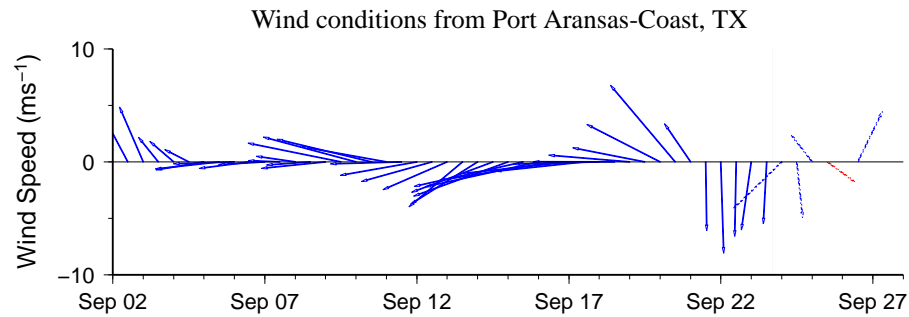
**Galveston Region:** Northeast to north winds (5-15kn, 3-8m/s) today through Wednesday becoming east winds (5-10kn, 3-5m/s) Wednesday afternoon. South winds (5kn, 3m/s) Wednesday night. East winds (5-10kn) Thursday becoming southeast winds (10kn, 5m/s) Thursday night.

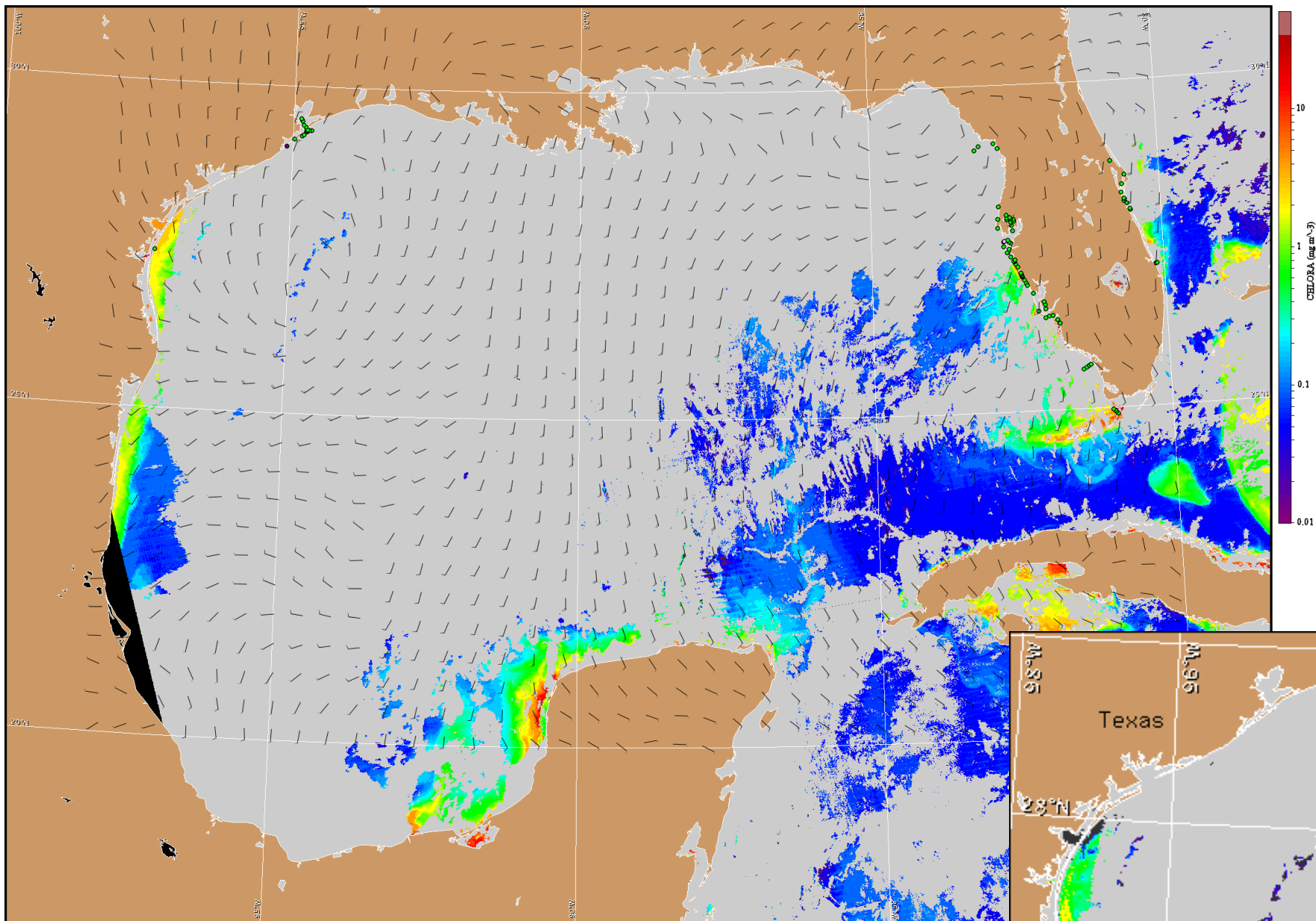
**Port Aransas:** Northeast to north winds (5-15kn) today through Wednesday. Southeast to east winds (5-15kn, 3-8m/s) Wednesday night through Thursday.

**Padre Island National Seashore Region:** North winds (15kn, 8m/s) today becoming northeast winds (10kn) tonight. Northwest winds (10kn) Tuesday becoming northeast winds (10kn) Tuesday afternoon then becoming light winds Tuesday night. Southeast winds (10kn) Wednesday. South winds (15kn) Thursday.



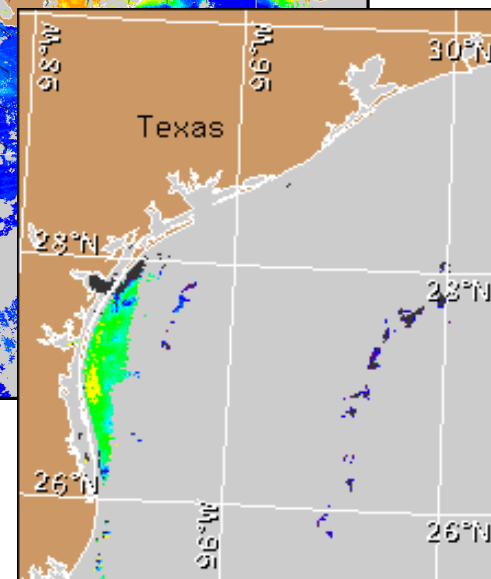
Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts. Wind observation and forecast data provided by NOAA's National Weather Service (NWS).





Satellite chlorophyll image and forecast winds for September 24, 2013 12Z with points representing cell concentration sampling data from September 13 to 19: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). Cell count data are provided by Texas Parks and Wildlife Department. For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

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Verified and suspected HAB areas shown in red. Other areas of high chlorophyll concentration shown in yellow (see p. 1 analysis for interpretation).